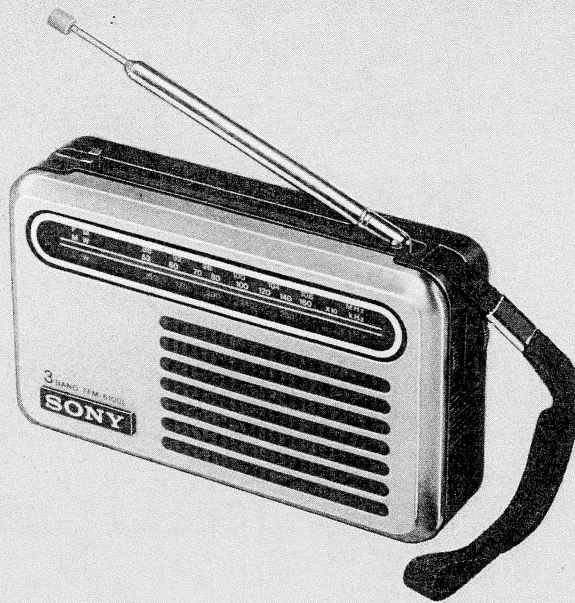


# TFM-6100L

*AEP Model*  
*UK Model*  
*E Model*



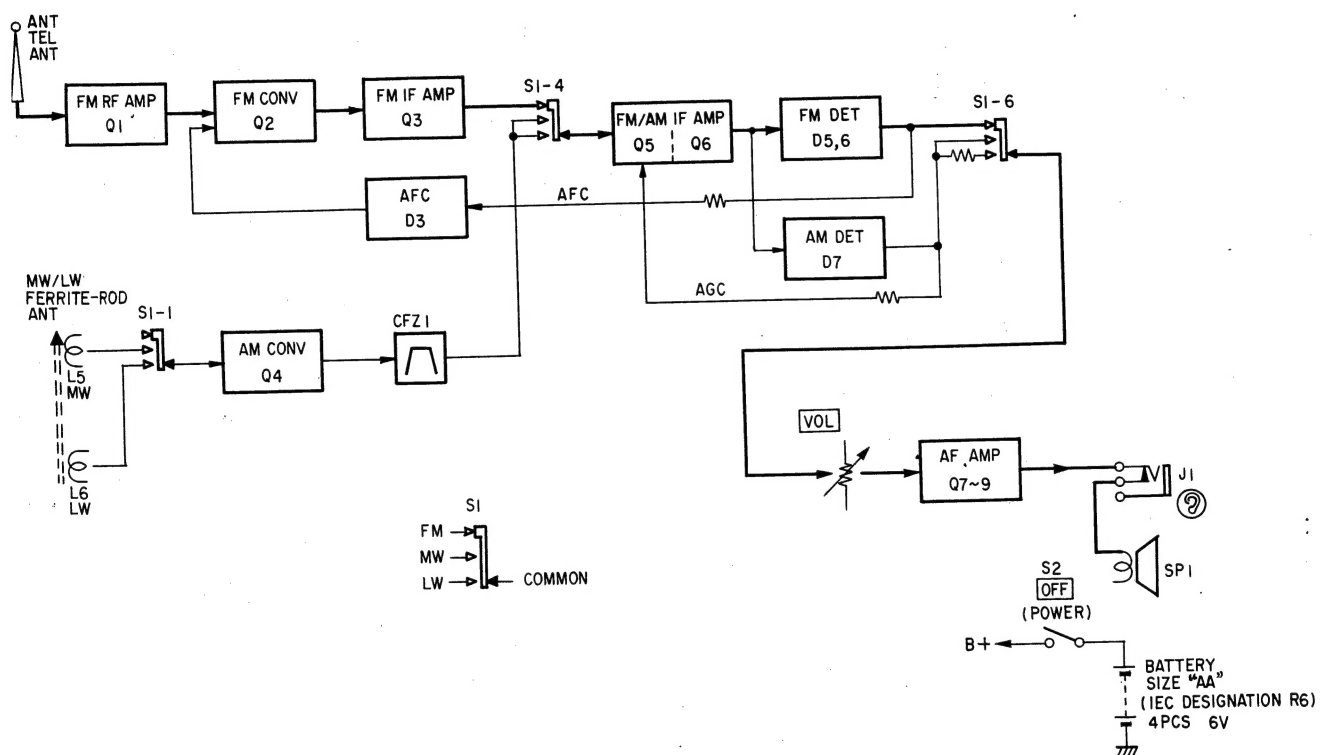
## FM-AM POCKETABLE RADIO

### SPECIFICATIONS

Frequency Range:	FM: 87.5 – 108 MHz
	MW: 530 – 1,605 kHz
	LW: 150 – 285 kHz
Antennas:	FM: telescopic MW/LW: built-in ferrite-rod antenna
Power Output:	200 mW (with 10 % harmonic distortion)
Speaker:	6.6 cm (2½") dia
Power Requirements:	6 V dc, battery size "AA" 4 pcs (IEC designation R6)
Dimensions:	158 (w) x 96 (h) x 43 (d) mm
	6¼ (w) x 3¾ (h) x 1¾ (d) inches
Weight:	470 g, 1 lb 1 oz, with batteries

**SONY**<sup>®</sup>  
**SERVICE MANUAL**

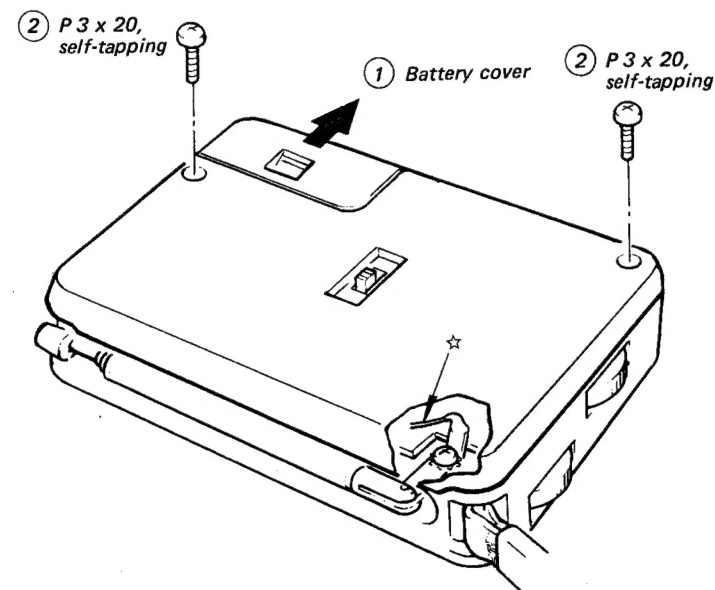
# SECTION 1 BLOCK DIAGRAM



## SECTION 2 DISASSEMBLY

### 2-1. REMOVAL

— rear cover —

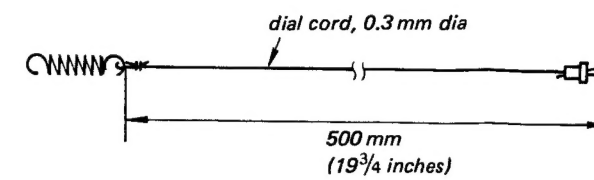


— printed circuit board —

Remove a white lead of the telescopic antenna, ("☆" mark in above), then remove the printed circuit board.

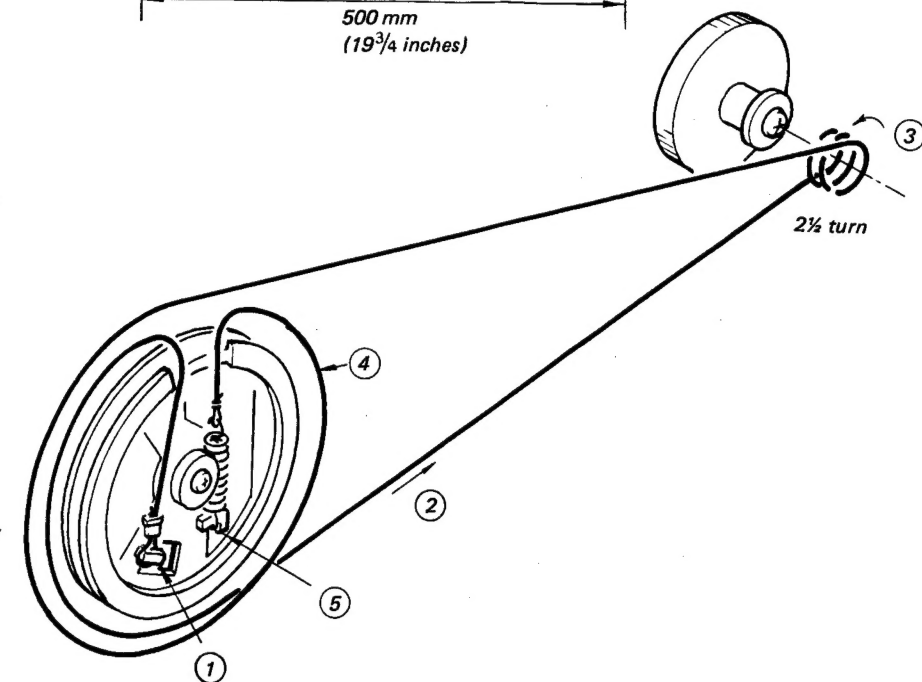
### 2-2. DIAL CORD STRINGING

#### 1. Preparation



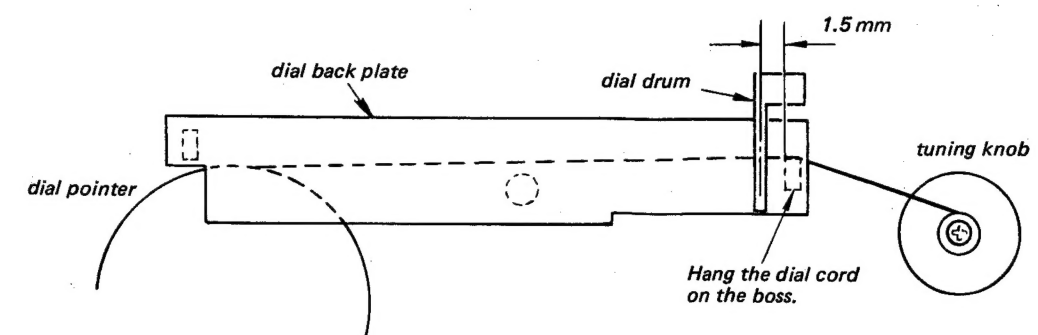
#### 2. Dial cord stringing

Turn the dial drum fully counterclockwise.



#### 3. Dial pointer calibration

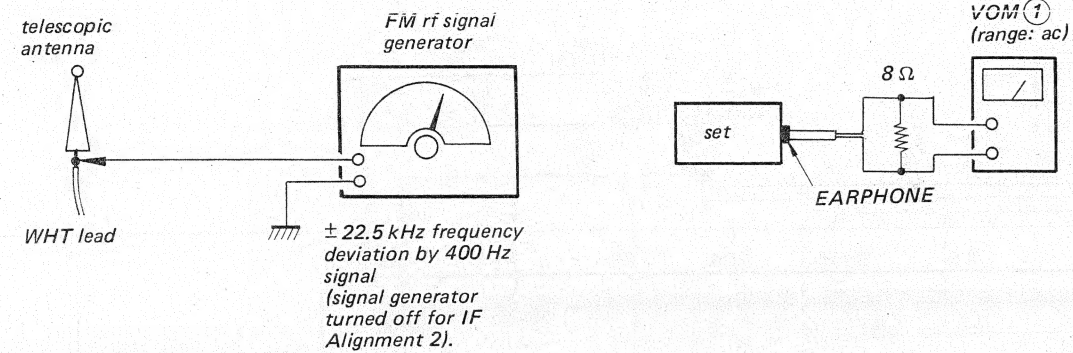
Turn the tuning knob fully clockwise.  
Place the dial pointer as shown below.





# SECTION 3 ADJUSTMENTS

## FM



FM Frequency Coverage Adjustment	
87.1 MHz (87.5 MHz)	L4
108.5 MHz (108 MHz)	CT2
Adjust for maximum reading on VOM (1).	

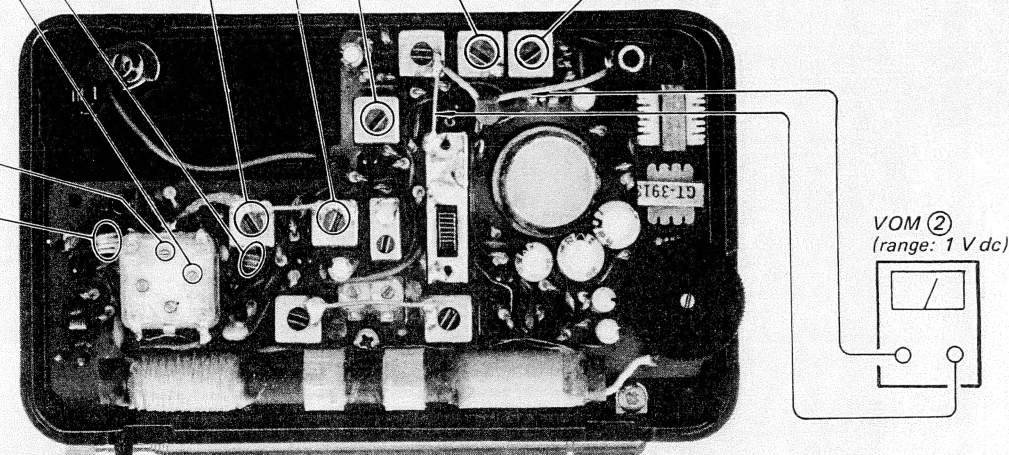
( ) : in West Germany

FM Tracking Adjustment	
108.5 MHz (108 MHz)	CT1
87.1 MHz (87.5 MHz)	L2
Adjust for maximum reading on VOM (1).	

( ) : in West Germany

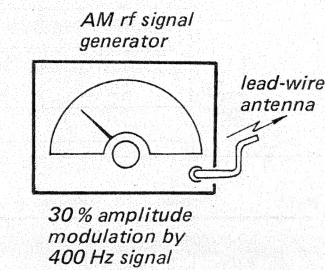
FM IF Alignment 1 (10.7 MHz)	
Adjust for maximum reading on VOM (1) with modulation.	
IFT-F1	-F2 -F3 -F4

FM IF Alignment 2	
Adjust for 0 V dc reading on VOM (2) without signal.	
IFT F5	



## AM IF and MW/LW

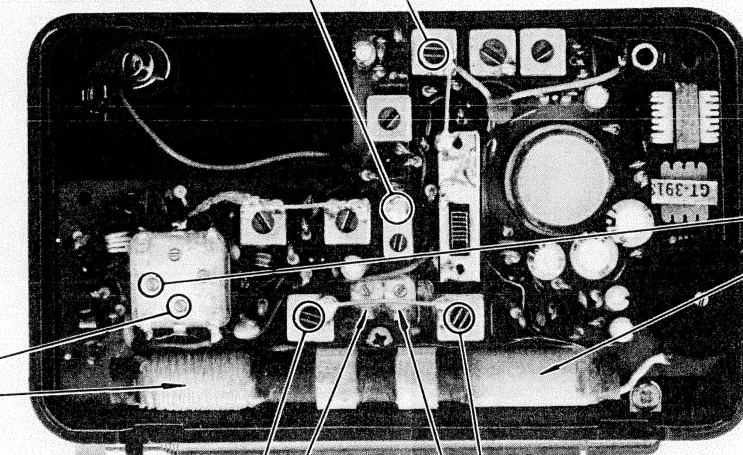
Adjust for maximum reading on VOM.



AM IF Alignment		
468 kHz	CFZ	IFT A1

LW Tracking Adjustment	
CT4	260 kHz
L6	185 kHz

LW Frequency Coverage Adjustment	
145 kHz	L8
300 kHz	CT5



MW Tracking Adjustment	
CT3	1400 kHz
L5	620 kHz

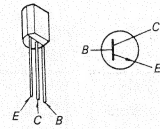
Note:  
After this adjustment, perform LW Frequency Coverage and Tracking Adjustment.

MW Frequency Coverage Adjustment	
520 kHz	L7
1680 kHz	CT6

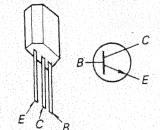


SECTION 4  
DIAGRAMS4-1. MOUNTING DIAGRAM  
— Conductor Side —

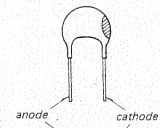
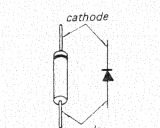
Q1-6, D3: 2SC710



Q7-9: 2SC633A

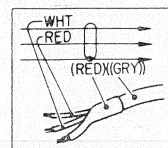


D8: VD1120

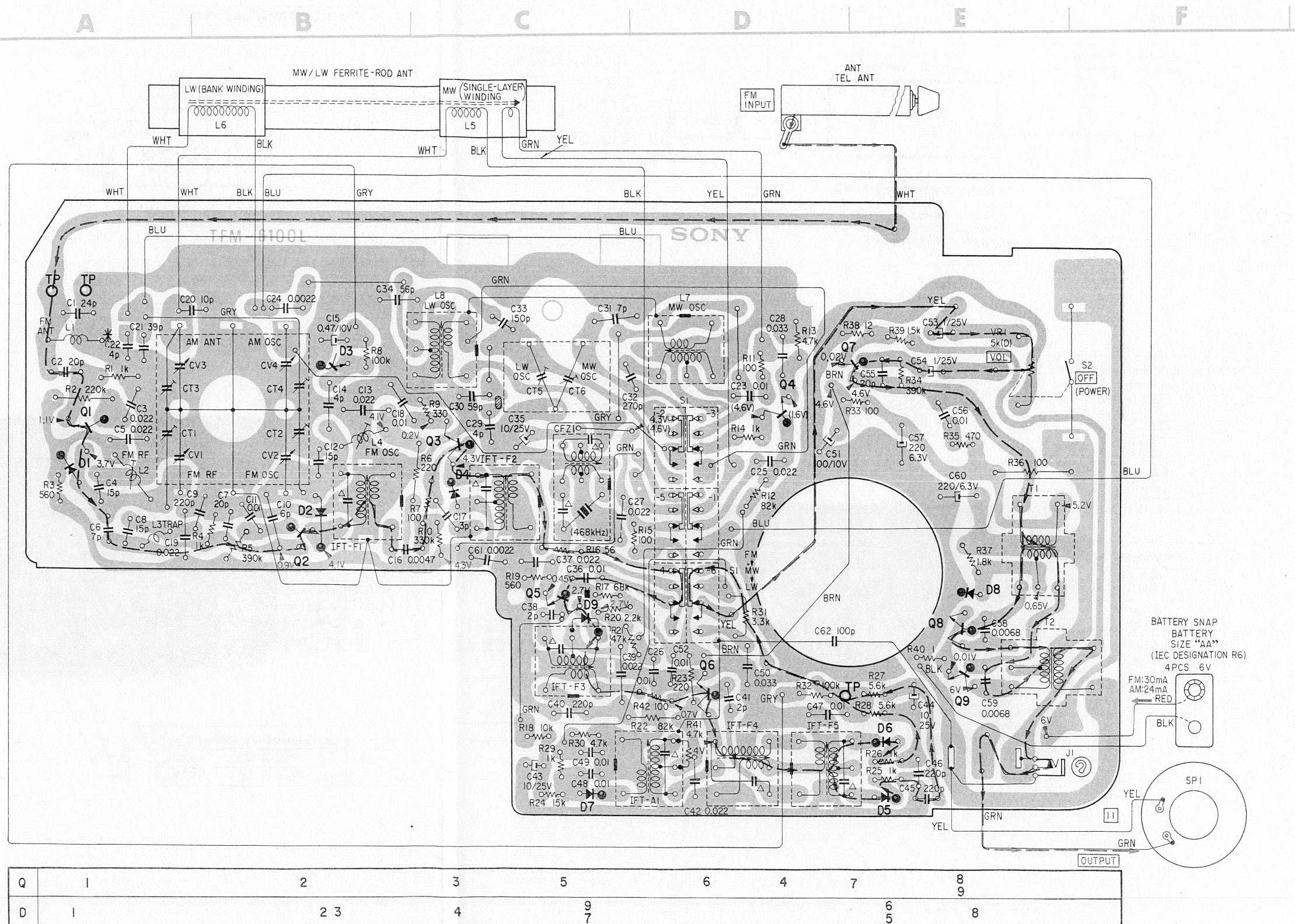
D1, 4 : 1S1555  
D2, 5, 6, 9: 1T261  
D7 : 1T22A

## Note:

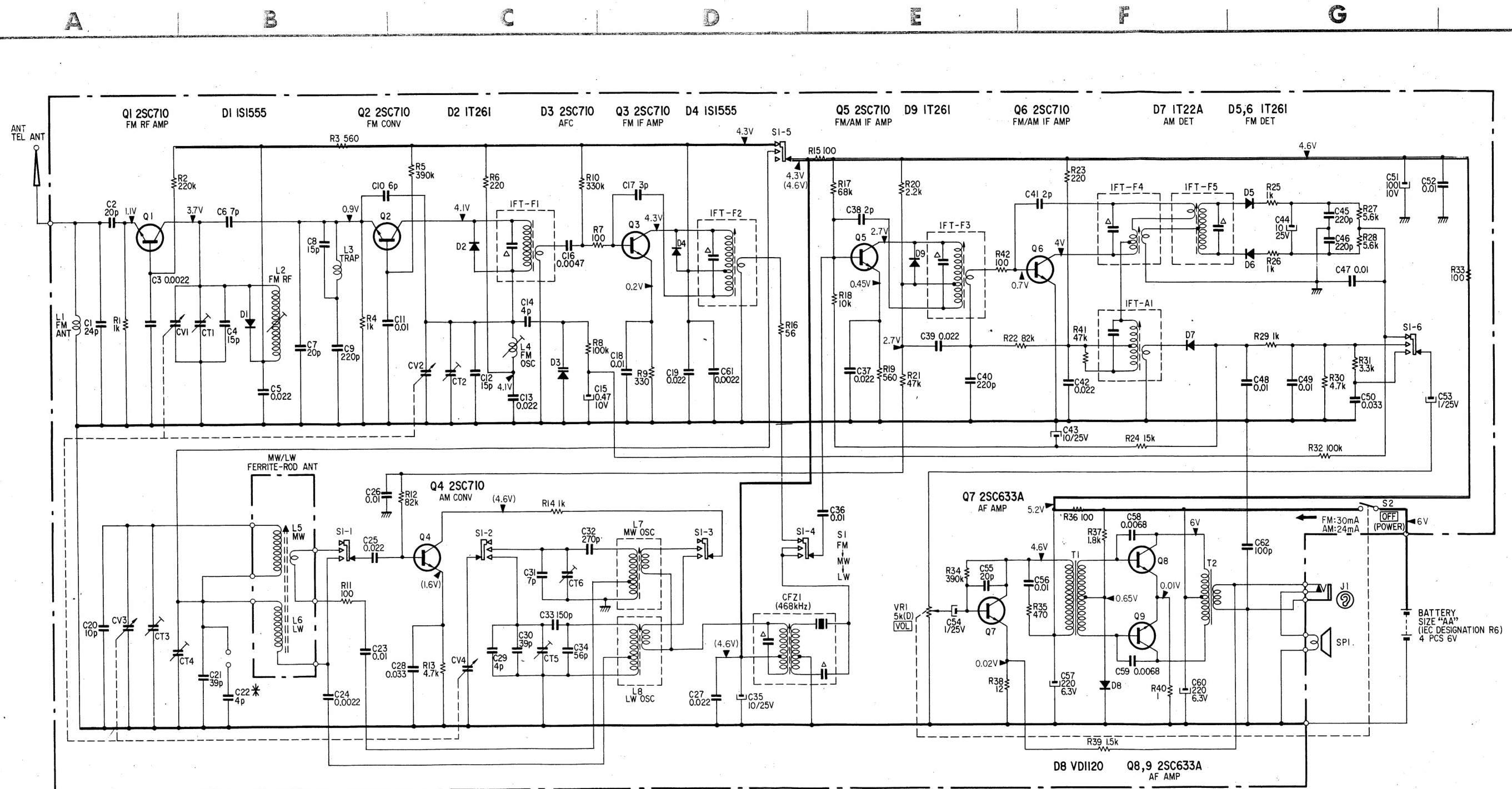
- Color code of sleeving over the end of the jacket.



- part mounted on the conductor side.
- indicates side identified with part number.
- B+ pattern
- signal path
- \* : for adjustment.



## 4-2. SCHEMATIC DIAGRAM



## Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF} = \mu\text{F}$  50WV or less are not indicated except for electrolytics.
- All resistors are in ohms.  $\frac{1}{4}\text{W}$  unless otherwise noted.  $\text{k}\Omega = 1000\Omega$ ,  $\text{M}\Omega = 1000\text{k}\Omega$ .
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.

- $\Delta$  : internal component.
- $\square$  : panel designation.
- Readings are taken under detuned conditions with a VOM (20  $\text{k}\Omega/\text{V}$ ).
- ( ) : AM no mark: FM
- Transistor is used for D3.
- \* : for adjustment.

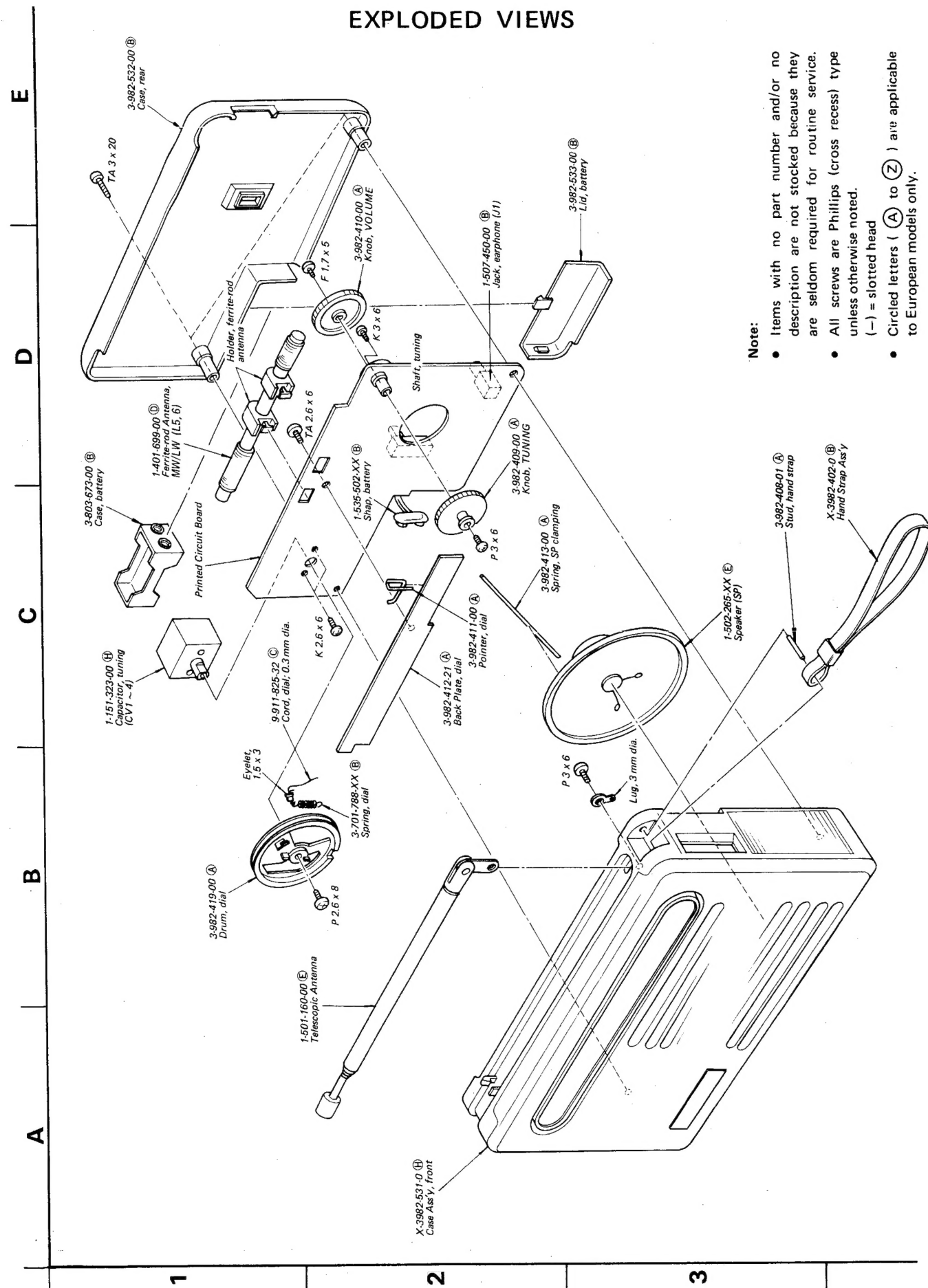
- — : B+ bus.
- Switch

Ref. No.	Switch	Position
S1	BAND	FM
S2	POWER	OFF



## SECTION 5

## EXPLODED VIEWS



## Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- (-) = slotted head
- Circled letters (A) to (Z) are applicable to European models only.

## SECTION 6

## ELECTRICAL PARTS LIST

Note: Circled letters (A) to (Z) are applicable to European models only.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
<b>SEMICONDUCTORS</b>					
<b>Transistors</b>					
Q1 - 6	(B) 2SC710		C6	1-102-944-11 (A) 7 p	
Q7 - 9	(B) 2SC633A		C7	1-102-958-11 (A) 20 p	
			C8	1-102-951-11 (A) 15 p	
			C9	1-102-978-11 (A) 220 p	
			C10	1-102-943-11 (A) 6 p	
<b>Diodes</b>					
D1	(B) 1S1555		C11	1-101-923-11 (A) 0.01	
D2	(B) 1T261		C12	1-102-670-11 (A) 18 p	
D3	(B) 2SC710		C13	1-101-924-11 (A) 0.022	
D4	(B) 1S1555		C14	1-102-937-11 (A) 4 p	
D5, 6	(B) 1T261		C15	1-127-022-11 (A) 0.47 10 V solid aluminum	
D7	(B) 1T22A		C16	1-101-922-11 (A) 0.0047	
D8	(B) VD1120		C17	1-102-936-11 (A) 3 p	
D9	(B) 1T261		C18	1-101-923-11 (A) 0.01	
<b>Coils</b>					
L5, 6	1-401-699-00 (D) Ferrite-rod Antenna, MW/LW		C19	1-101-924-11 (A) 0.022	
L7	1-405-761-00 (B) MW Osc		C20	1-102-947-11 (A) 10 p	
L8	1-405-762-00 (J) LW Osc		C21	1-102-965-11 (A) 39 p	
<b>Transformers</b>					
T1	1-423-066-XX (B) Input		C22	1-102-937-11 (A) 4 p	
T2	1-427-429-00 (B) Output		C23	1-108-239-12 (A) 0.01 mylar	
IFT, A-1	1-403-813-00 (B) AM IFT		C24	1-108-230-12 (A) 0.0022 mylar	
IFT, F-1	1-403-899-00 (B) FM IFT		C25	1-101-924-11 (A) 0.022	
IFT, F-2, 3	1-403-284-00 (B) FM IFT		C26	1-108-239-12 (A) 0.01 mylar	
IFT, F-4	1-403-903-00 (B) FM IFT, Discriminator		C27	1-108-242-12 (A) 0.022 mylar	
IFT, F-5	1-403-902-00 (B) FM IFT, Discriminator		C28	1-108-244-12 (A) 0.033 mylar	
<b>CAPACITORS</b>					
All capacitors are in $\mu$ F and ceramic unless otherwise noted. 50 WV or less are not indicated except for electrolytics. pF = $\mu$ F, elect = electrolytic					
C1	1-102-960-11 (A) 24 p		C29	1-102-937-11 (A) 4 p	
C2	1-102-958-11 (A) 20 p		C30	1-102-965-11 (A) 39 p	
C3	1-101-919-11 (A) 0.0022		C31	1-102-944-11 (A) 7 p	
C4	1-102-951-11 (A) 15 p		C32	1-103-711-11 (A) 270 p	
C5	1-101-924-11 (A) 0.022		C33	1-103-705-11 (A) 150 p	
			C34	1-102-730-11 (A) 56 p	
			C35	1-121-651-11 (A) 10 16 V elect	
			C36	1-101-923-11 (A) 0.01	
			C37	1-101-924-11 (A) 0.022	
			C38	1-102-935-11 (A) 2 p	
			C39	1-101-924-11 (A) 0.022	
			C40	1-102-978-11 (A) 220 p	
			C41	1-102-935-11 (A) 2 p	
			C42	1-101-924-11 (A) 0.022	
			C43, 44	1-121-651-11 (A) 10 16 V elect	
			C45, 46	1-102-978-11 (A) 220 p	



Note: Circled letters (A) to (Z) are applicable to European models only.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
C47, 48, 49	1-108-239-12 (A) 0.01	mylar
C50	1-108-244-12 (A) 0.033	mylar
C51	1-121-414-11 (A) 100	10 V elect
C52	1-101-923-11 (A) 0.01	
C53, 54	1-121-391-11 (A) 1	50 V elect
C55	1-102-958-11 (A) 20 p	
C56	1-108-239-12 (A) 0.01	mylar
C57	1-121-420-11 (B) 220	10 V elect
C58, 59	1-108-237-12 (A) 0.0068	mylar
C60	1-121-420-11 (B) 220	10 V elect
C61	1-101-919-11 (A) 0.0022	
C62	1-101-923-11 (A) 0.01	
CFZ	1-403-823-00 (C) CFZ	
CT5, 6	1-141-146-XX (B) Trimmer	
CV1-4	1-151-323-00 (H) Tuning	

## MISCELLANEOUS

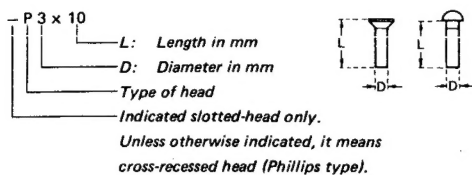
ANT	1-501-160-00 (E) Telescopic Antenna
J1	1-507-450-00 (B) Jack, earphone
S1	1-552-186-00 (C) Switch, slide; FM/MW/LW
S2	1-224-077-21 (B) Switch; POWER included in VR1
SP	1-502-265-XX (E) Speaker
VR1	1-224-077-21 (B) Resistor, 5 k $\Omega$ ; variable; VOLUME
	1-535-502-00 (B) Snap, battery

## ACCESSORIES

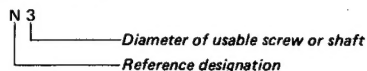
<u>Part No.</u>	<u>Description</u>
X-3982-533-0	(E) Carton Ass'y
1-504-055-12	(B) Earphone (ME-20H)
3-846-826-01	(A) Sheet, protection
3-982-427-00	(A) Sheet
3-982-436-11	(A) Manual, instruction (AEP, E model)
3-982-436-21	(A) Manual, instruction (UK model)
3-982-437-01	(A) Label, FTZ

## HARDWARE NOMENCLATURE

Screw:



Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
<b>SCREWS</b>			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		brazer-head screw	

Reference Designation	Shape	Description	Remarks
<b>SELF-TAPPING SCREWS</b>			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
<b>SET SCREWS</b>			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
<b>NUT</b>			
N		nut	
<b>WASHERS</b>			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
<b>RETAINING RINGS</b>			
E		retaining ring	
G		grip-type retaining ring	

Sony Corporation

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Date	23 Aug 78	Ref. N°	TR-00578	Model	TFM-6100L
Subject	Correction of S/M Correction du M/S Berichtigung des Service-Handbuchs				

Page 11, Seite 11:

